

ENVIRONMENTAL ASSESSMENT  
Fisheries Division  
Montana Fish, Wildlife & Parks  
Miller Creek restoration and sediment reduction

General Purpose: The 1995 Montana Legislature enacted sections 87-1-272 through 273, MCA that direct Montana Fish, Wildlife & Parks (FWP) to administer a Future Fisheries Improvement Program (FFIP). The program involves providing funding for physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. Additionally, the 1999 Montana Legislature amended statute sections 87-1-273, 15-38-202 and Section 5, Chapter 463, Laws of 1995 to create a bull trout and cutthroat trout enhancement program. This legislation was amended again in 2013 to open the program to all native fish species (statute section 87-1-283). The program now calls for the enhancement of native fish through habitat restoration, natural reproduction and reductions in species competition by way of the FFIP.

The FFIP tentatively plans to provide partial funding toward this project, which would encourage the project area to regain its natural function. The applicant proposes to designate a woody riparian vegetation expansion corridor and install bed aggradation structures (with cobble, large wood, vegetation, or beaver dam analogs), channel shaping / realignment, riparian planting, habitat structures, and floodplain wetlands. The goals are to reduce water temperatures and sediment while enhancing aquatic and terrestrial habitat, thereby increasing wild fish populations. The stream is listed for temperature and sediment impairments (Clean Water Act section 303(d) list).

I. Location of Project:

This project will be conducted on Miller Creek, a tributary to the Bitterroot River, located approximately ten miles southeast of Missoula within Township 11N, Range 18W, Section 7 in Missoula County (Figure 1). The project site is located below U.S. Forest Service property in upper Miller Creek.

II. Need for the Project:

One goal within FWP's six-year operations plan for the fisheries program is to "protect, maintain, and restore native fish populations, their habitats, life cycles, and genetic diversity to ensure stewardship of native species." This project improves stream habitat in an area that supports pure westslope cutthroat trout. The restoration completed is intended to reduce sediment and increase available habitat, which should improve conditions for native species. This also meets the FWP Statewide Fisheries Management Plan goal to "restore and enhance degraded fisheries habitats." By implementing an improvement project and creating/restoring important habitat, this proposed project would help meet this goal.

III. Scope of the Project:

The project proposes to designate a woody riparian vegetation expansion corridor and install bed aggradation structures (with cobble, large wood, vegetation, or beaver dam analogs) to reconnect the

stream to its floodplain, complete channel shaping and realignment, plant riparian vegetation, install habitat structures, and create floodplain wetlands (Figure 2). The project area has been degraded due to past logging and agricultural practices and the streambanks are actively eroding. The stream has disconnected from the floodplain, fine sediment has been entering the stream, habitat diversity has been reduced, and there is little riparian cover. This project would address these problems and return the project area to its natural function (Figure 3). The overall goal is to reduce water temperatures and sediment while enhancing aquatic and terrestrial habitat, thereby increasing wild fish populations. This project is expected to cost \$142,350.10. Of this total, the FFIP would be contributing up to \$28,400 to complete the project.

Matching Contributor	In-kind services	In-kind cash
Montana Dept. of Environmental Quality 319		\$80,200
Montana Aquatic Resources Services (MARS)		\$20,000
Westslope Chapter of Trout Unlimited		\$5,000
Landowner	\$1,750.10	\$7,000
<b>Total matching funds: \$113,950.10</b>		

IV. Environmental Impact Review Checklist:

**Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment**

Project Title: Miller Creek restoration and sediment reduction

Division/Bureau: Fisheries Division / Fish Management Bureau (FFIP)

Description of Project: The project proposes to designate a woody riparian vegetation expansion corridor and install bed aggradation to reconnect the floodplain, complete channel shaping and realignment, plant riparian vegetation, install habitat structures, and create floodplain wetlands.

**A. POTENTIAL IMPACTS TO THE PHYSICAL ENVIRONMENT**

Will the proposed action result in potential impacts to:	Unknown	Potentially Significant	Minor	None	Can Be Mitigated	Comments Provided
1. Geology and soil quality, stability and moisture			X			X
2. Air quality or objectionable odors				X		
3. Water quality, quantity and distribution (surface or groundwater)			X			X
4. Existing water right or reservation				X		
5. Vegetation cover, quantity and quality			X			X

6. Unique, endangered, or fragile vegetative species				X		
7. Terrestrial or aquatic life and/or habitats			X			X
8. Unique, endangered, or fragile wildlife or fisheries species			X			X
9. Introduction of new species into an area				X		
10. Changes to abundance or movement of species			X			X

## B. POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

Will the proposed action result in potential impacts to:	Unknown	Potentially Significant	Minor	None	Can Be Mitigated	Comments Provided
1. Noise and/or electrical effects				X		
2. Land use				X		
3. Risk and/or health hazards				X		
4. Community impact				X		
5. Public services/taxes/utilities				X		
6. Potential revenue and/or project maintenance costs				X		
7. Aesthetics and recreation				X		
8. Cultural and historic resources				X		
9. Evaluation of significance				X		
10. Generate public controversy				X		

## V. Explanation of Impacts to the Physical Environment

### 1. Geology and soil quality, stability and moisture

This project is expected to improve soil stability through reduced erosion and proper channel dimensions. The bank treatments and riparian plantings are intended to encourage root growth and hold banks together. As a result of this project, significantly more soil would be contained within the streambanks and would not erode into the stream. The overall impact is expected to be positive.

### 3. Water quantity, quality, and distribution.

No changes in streamflow would occur in Miller Creek as a result of the proposed project. However, work would be completed in-channel and along the banks, which may affect turbidity. To address turbidity, operation of equipment in the stream channel will be minimized to the

extent practicable. A 318 authorization will be obtained, if necessary, to meet short-term water quality standards. Long term, the project is expected to improve water quality through reduced sediment inputs.

5. Vegetation cover, quantity and quality

This project would improve vegetation cover, quantity, and quality by revegetation of the stream banks and riparian area. Vegetative communities will be actively created through planting and native seeding, and natural recruitment will be encouraged. Increased overhead and in-stream vegetative cover should provide additional habitat for aquatic species. This project will result in a functional and diverse stream and riparian corridor, which will greatly improve the vegetative cover, quantity, and quality.

7. Terrestrial or aquatic life and/or habitats.

This project would designate a woody riparian vegetation expansion corridor and install bed aggradation structures, channel shaping / realignment, riparian planting, habitat structures, and floodplain wetlands on one mile of stream. This is intended to benefit overall stream and riparian health and function, which supports both terrestrial and aquatic life.

8. Unique, endangered, or fragile wildlife or fisheries species.

This project will affect westslope cutthroat trout, which is federally recognized as Sensitive and a Species of Concern in Montana. The impacts on this species due to this project are predicted to be positive, potentially increasing recruitment and survival.

10. Changes to abundance or movement of species.

Reduced sediment and improved habitat have the potential to improve fish population abundance through improved spawning, rearing, and overall habitat. Vegetative cover can provide shade and reduce water temperature, which can have a positive impact on survival. Any changes to the abundance of fish species as a result of this project is considered positive.

VI. Explanation of Impacts to the Human Environment

None

VII. Narrative Evaluation and Comment.

There are no anticipated cumulative effects.

VIII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative.

If no funding is provided through the FFIP, either the applicant would have to seek additional sources of funding to complete the project, or the affected area of Miller Creek would remain impaired.

2. The Proposed Alternative.

The proposed alternative intends to provide partial funding through the FFIP to restore one mile of upper Miller Creek and improve habitat for westslope cutthroat trout and other aquatic species.

IX. Environmental Assessment Conclusion Section.

1. Other groups or agencies contacted, or which may have overlapping jurisdiction:

Missoula Conservation District  
Army Corps of Engineers  
Department of Environmental Quality

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

None.

3. Is an EIS required?

No. We conclude, from this review, that the proposed activities will have an overall positive impact on the physical and human environment and will therefore not require the extensive analysis associated with an EIS.

4. Level of public involvement.

The project application to the FFIP has been posted on the FWP webpage for public comment. No comments have been received to date. The proposed project was reviewed and supported by the public review panel of the FFIP. The proposed project also will be reviewed by the Fish & Wildlife Commission, and funding will be contingent upon their approval. The EA will be distributed to all individuals and groups listed on the cover letter and will be published on the FWP webpage: [www.fwp.mt.gov](http://www.fwp.mt.gov).

5. Duration of comment period?

Public comment will be accepted through 11:59 PM on 7/30/2019.

6. Person(s) responsible for preparing the EA.

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FIGURE 1: project location





FIGURE 2: Restoration overview

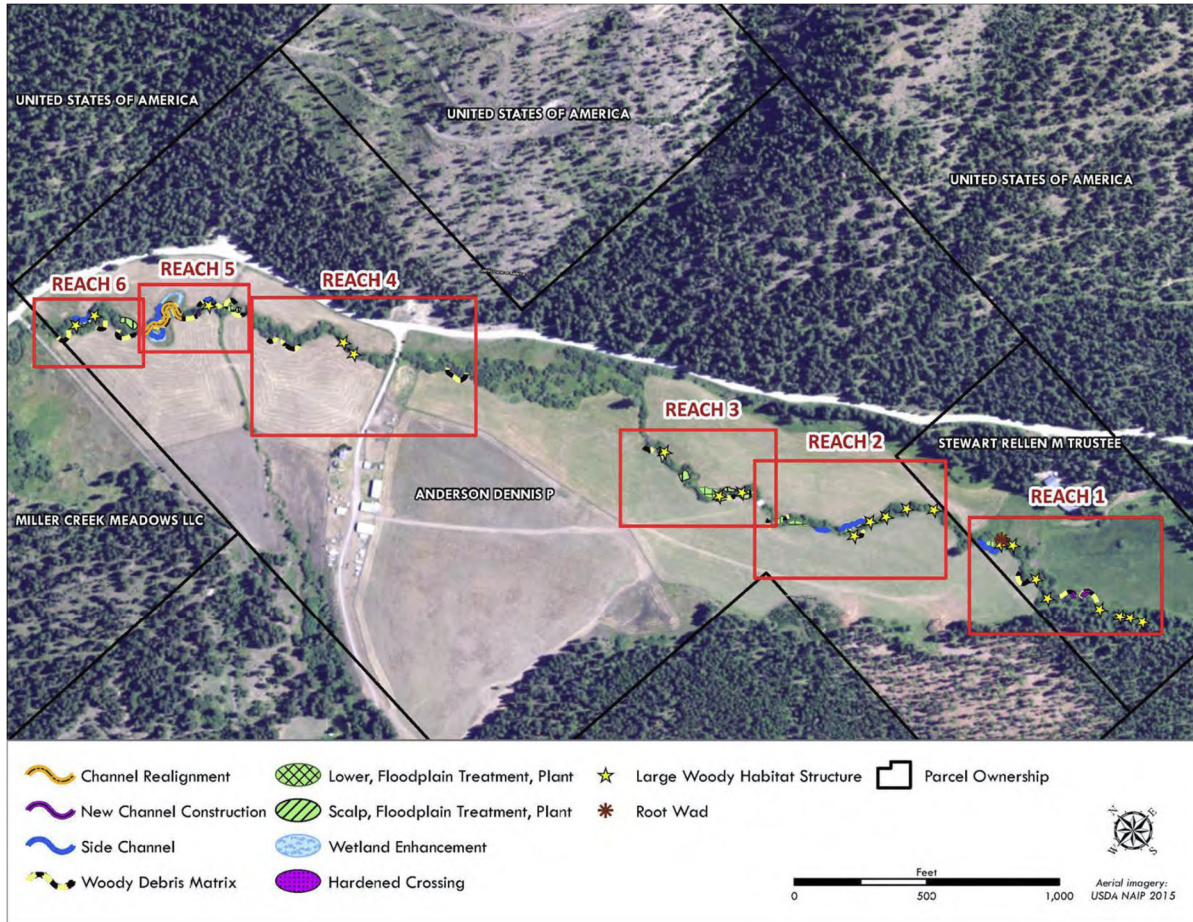




FIGURE 3: Existing conditions

